

## Genetics Webquest

Write your answers on your own paper.

### General Genetics

<http://library.thinkquest.org/3696/index2.htm>

Click on Getting Started

1. What is Genetics?
2. What are Genes made of?

Click on Operations of DNA

3. If DNA were straight it would be \_\_\_\_\_.
4. DNA's shape is called a \_\_\_\_\_.
5. DNA is made of \_\_\_\_\_.

Click on Operations of Chromosomes

6. DNA coils up to form a \_\_\_\_\_.
7. How many chromosomes does a mosquito have?
8. How many chromosomes does a cabbage plant have?
9. How many chromosomes does a human have?

Click on Current Science

10. Explain what is being experimented with cloning.
11. Click on The Quiz, take the quiz, in the name box type the letter A.

<http://history.nih.gov/exhibits/genetics/kids.htm>

Watch the slide show.

12. The human body is made of \_\_\_\_\_, which have a nucleus; inside the nucleus are \_\_\_\_\_, which have the instructions \_\_\_\_\_.
13. Write 2 more sentences about the slides.

### Punnet Square Review

<http://www.athro.com/evo/gen/punexam.html>

14. Find Monohybrid Crosses **ONLY**, for the first two questions under monohybrid crosses answer the question for each of the choices in the drop down box. The first choice is bb genotype, and you pick the chance of having it. **Then you change the bb genotype to another** and pick the chances again, it will tell you if you are right or wrong.

### Mendel Review

[http://anthro.palomar.edu/mendel/mendel\\_1.htm](http://anthro.palomar.edu/mendel/mendel_1.htm)

15. Mendel is called the \_\_\_\_\_.
16. Name **seven** traits that Mendel found are passed from one generation to another without being changed or blended; they appear in only one of two forms.

17. What are two reasons that Mendel chose to use pea plants for his experiments?

18. What are the 3 important conclusions he came to as a result of his work?

### **Pedigrees**

<http://www.aboutkidshealth.ca/En/HowTheBodyWorks/GeneticsIntroduction/SimpleSingleGeneInheritance/AutosomalDominantInheritance/Pages/AutosomalDominantInheritanceSamplePedigree.aspx>

Pedigrees are diagrams that track a particular trait through a family to show possible carriers and those who are affected by a condition.

19. What color is the symbol that represents a person who does not show a trait? What color is the symbol that represents a person who shows the trait?

### **Genetic Disorders**

<http://www.nlm.nih.gov/medlineplus/geneticdisorders.html>

20. What is a genetic disorder?

21. What is a mutation in a gene?

22. What are some ways mutations can happen?

23. What is another way to get a mutated gene?

24. Some genetic disorders are caused by a problem with

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<http://www.ygyh.org/j>

25. Click on Huntington's disease and roll your mouse over the different areas to learn about the disease, when you roll over Inheritance, answer the question. Is this disease Dominant or Recessive?

26. Click on Sickle Cell Disease roll your mouse over the different areas to learn about the disease, when you roll over Cause answer the question? What causes Sickle Cell Disease?

27. Click on Alzheimer's disease roll your mouse over the different areas to learn about the disease, when you roll over Cause answer the question. What causes Alzheimer's disease?

28. Click on Down syndrome roll your mouse over the different areas to learn about the disease, when you roll over Cause answer the question. What causes Down syndrome?

[http://kidshealth.org/kid/talk/qa/what\\_is\\_gene.html](http://kidshealth.org/kid/talk/qa/what_is_gene.html)

29. What is a Gene?

30. What problems can genes have?

31. What is Gene Therapy?

Cloning

<http://learn.genetics.utah.edu/content/tech/cloning/clickandclone/>

Go to the Site and Play through the cloning.

32. Write down all the steps that must happen to clone.

[http://nature.ca/genome/04/041/0414\\_e.cfm](http://nature.ca/genome/04/041/0414_e.cfm)

Play the game, read as you go.

[http://pbskids.org/dragonflytv/games/game\\_dogbreeding.html](http://pbskids.org/dragonflytv/games/game_dogbreeding.html)

You may play the game.

<http://www.playkidsgames.com/member-homepages.php?d=135>

You may play the stingray chaser by clicking Genetics Vocabulary under the name of the game.

You may play the Word Scramble Problems and Definitions by again clicking Genetics vocabulary under the name of the game.